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TAHA, SHAQ				
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/530,740

**Applicant(s)**

AHRNDT, THOMAS

**Examiner**

SHAQ TAHA

**Art Unit**

2446

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 01 June 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 29 and 32 - 43 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 29 and 32 - 43 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SI.08)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Notice of Interval Patent Application
- 6) ☐ Other: \_\_\_\_\_
- Paper No(s)/Mail Date \_\_\_\_\_

#### **DETAILED ACTION**

This is a Non-final action for application number 10/894,725 based on after an appeal brief filed on 12/31/2009. The original application was filed on 07/20/2004. Claims 1 – 32 are currently pending and have been considered below. Claims 1, 18, and 31 are independent claims. The examiner suggests incorporating the teachings of claim 11 and 14 into independent claims 1, 12, and 31 and incorporating the teachings of the specification by transforming the absolute URL into a relative URL by prefixing a backslash in the absolute URL.

In view of the appeal brief filed on 12/09/2009, PROSECUTION IS HEREBY REOPENED. New grounds of rejections are set forth below.

To avoid abandonment of the application, appellant must exercise one of the following two options:

(1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,

(2) initiate a new appeal by filing a notice of appeal under 37 CFR 41.31 followed by an appeal brief under 37 CFR 41.37. The previously paid notice of appeal fee and appeal brief fee can be applied to the new appeal. If, however, the appeal fees set forth in 37 CFR 41.20 have been increased since they were previously paid, then appellant must pay the difference between the increased fees and the amount previously paid.

A Supervisory Patent Examiner (SPE) has approved of reopening prosecution by signing below:

**Claim Rejections - 35 USC § 103**

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 29, 33 – 40, 42, and 43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Price et al. (US 2002/0163883), in view of McHale et al. (US 6,870,834)

Regarding claim 29, a method for controlling an authentication in a telecommunications network, comprising: providing, at a subscriber terminal device, an external data transmission interface, **[The WAN 18 may be implemented as, for example, an ATM network, a Frame Relay network, or an Internet Protocol (IP) network, wherein WAN is the external data transmission interface, (Price et al., Paragraph 23)],**

the external data transmission interface having a physical data transmission channel, **[the xDSL physical layer may support various types of higher-layer data and voice traffic, wherein the xDSL is the physical data transmission channel as shown in Fig. 1, Ref # 16, (Price et al., Paragraph 10)],**

and an authentication channel configured to interface with a telecommunications network, **[the xDSL physical layer may support various types of higher-layer data**

**and voice traffic, wherein the xDSL is the physical data transmission channel that includes an authentication channel as shown in Fig. 1, Ref # 16, (Price et al., Paragraph 10)],**

**connecting the subscriber terminal device to an internet service provider, [Fig. 1, wherein the subscriber's device 12 is connected to the Internet Service Provider 22 through WAN and a xDSL],**

**the connection by the external data transmission interface to the internet service provider via a telecommunications central office exchange, [NAP 14 represents an entity that (i) terminates xDSL telecommunications link 16 at a central office or other local exchange termination point, wherein the network access provider includes a central office to connect the subscriber to the ISP, (Price et al., Paragraph 24)],**

**monitoring data traffic received on the external data transmission interface and which is received by the subscriber terminal device, [a provider of packetized voice (PV) can detect and help prevent congestion in a distributed network, wherein a congestion is detected by monitoring data traffic sent to the subscriber, (Price et al., Paragraph 15)],**

**controlling logon and logoff procedures in the authentication channel based on the monitored data traffic, [prevent additional calls from being made by a user of an IAD, wherein monitored data indicates a data congestion occurred then a logoff procedure will occur based on the monitored data, (Price et al., Paragraph 17)],**

Price et al. fails to explicitly teach disconnecting the subscriber terminal device from the internet service provider by a logoff procedure in the authentication channel when no data traffic is received within duration of time,

McHale et al. teaches an activity detector disconnects a subscriber after a predetermined period of inactivity, **(McHale et al., Col. 3, lines 3 - 5)**, in order to release the modem for use by another subscriber, **(McHale et al., Col. 3, lines 3 – 5)**,

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify Price et al. by disconnecting the subscriber terminal device from the internet service provider by a logoff procedure in the authentication channel when no data traffic is received within duration of time, **(McHale et al., Col. 3, lines 3 - 5)**, in order to release the modem for use by another subscriber, **(McHale et al., Col. 3, lines 3 – 5)**.

Regarding claim 33, the method according to claim 29, further comprising controlling the physical data transmission channel of the external data transmission interface based on the monitored data traffic, **[prevent additional calls from being made by a user of an IAD, wherein monitored data indicates a data congestion occurred then a logoff procedure will occur based on the monitored data, (Price et al., Paragraph 17)]**.

Regarding claim 34, the method according to claim 29, wherein the physical data transmission channel is always active, **[The xDSL termination units can be**

**connected to the POTS subscriber lines via splitter devices that separate the xDSL data traffic from voice traffic on the telephone lines, (Price et al., Paragraph 8)].**

Regarding claim 35, the method according to claim 29, further comprising:  
providing, at the subscriber terminal device, an internal data transmission interface configured to interface with a data processing unit, **[The data transfer device can detect the approach of congestion in the distributed network and assert a designated bit within the protocol of the LAN, (Price et al., Paragraph 16)],**

monitoring data traffic received by the internal data transmission interface, **[The data transfer device can detect the approach of congestion in the distributed network and assert a designated bit within the protocol of the LAN, (Price et al., Paragraph 16)],**

and re-connecting the subscriber terminal device to the internet service provider by a logon procedure in the authentication channel when the data traffic is received by the internal data transmission interface, **[When DSL concentrator 26A determines that a congestion abatement threshold (CA) associated with a particular port has been crossed because the traffic has subsided (i.e., some of the existing calls went on-hook),(Price et al., Paragraph 39)].**

Regarding claim 36, the method according to claim 29, further comprising:  
monitoring data traffic received by the external data transmission interface, **[a provider**

**of packetized voice (PV) can detect and help prevent congestion in a distributed network, wherein a congestion is detected by monitoring data traffic sent to the subscriber, (Price et al., Paragraph 15)],**

and re-connecting the subscriber terminal device to the internet service provider by a logon procedure in the authentication channel when the data traffic is received by the external data transmission interface, **[When DSL concentrator 26A determines that a congestion abatement threshold (CA) associated with a particular port has been crossed because the traffic has subsided (i.e., some of the existing calls went on-hook),(Price et al., Paragraph 39)].**

Regarding claim 37, Price et al. teaches a customer premises equipment, comprising: a data processing unit, **[Fig. 1, Ref # 14],**

an xDSL modem having a first interface and a second interface, the first interface for a connection between the xDSL modem and the data processing unit in order for the xDSL to receive a first data traffic, **[The CPE can include an xDSL interface component that has an xDSL termination unit for terminating the xDSL link, as well as a buffer or other interface component between the xDSL termination unit and other CPE components, (Price et al., Paragraph 9)],**

the second interface for a connection between the xDSL modem and an internet service provider via a telecommunications network exchange in order for the xDSL to receive a second data traffic, **[The xDSL interface may be implemented, for example, in the form of a network interface card (NIC) that interfaces between the**



**xDSL link and a bus on a personal computer, workstation or other computing device, (Price et al., Paragraph 9)],**

the second interface has an authentication channel in a layer higher than a physical data transmission layer, **[the xDSL physical layer may support various types of higher-layer data and voice traffic, wherein the xDSL is the physical data transmission channel that includes an authentication channel as shown in Fig. 1, Ref # 16, (Price et al., Paragraph 10)],**

the xDSL modem transfers data between the telecommunications network and the data processing unit based on the first and second data traffic, **[Fig. 1, wherein the subscriber's device 12 is connected to the Internet Service Provider 22 through WAN and a xDSL],**

and a control unit that monitors the first data traffic or the second data traffic and automatically controls a logon procedure and a logoff procedure in the authentication channel based on the monitored traffic, **[prevent additional calls from being made by a user of an IAD, wherein monitored data indicates a data congestion occurred then a logoff procedure will occur based on the monitored data, (Price et al., Paragraph 17)],**

controlling logon and logoff procedures in the authentication channel based on the monitored data traffic, **[prevent additional calls from being made by a user of an IAD, wherein monitored data indicates a data congestion occurred then a logoff procedure will occur based on the monitored data, (Price et al., Paragraph 17)],**

Price et al. fails to teach that when data traffic is not detected within a duration of time the control unit sends a control signal to the xDSL modem and the xDSL modem starts the logoff procedure which is carried out in the authentication channel, thereby causing the connection between the xDSL modem and the internet service provider to be logged off,

McHale et al. teaches an activity detector disconnects a subscriber after a predetermined period of inactivity, (**McHale et al., Col. 3, lines 3 - 5**), in order to release the modem for use by another subscriber, (**McHale et al., Col. 3, lines 3 – 5**),

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify Price et al. by disconnecting the subscriber terminal device from the internet service provider by a logoff procedure in the authentication channel when no data traffic is received within duration of time, (**McHale et al., Col. 3, lines 3 - 5**), in order to release the modem for use by another subscriber, (**McHale et al., Col. 3, lines 3 – 5**).

Regarding claim 38, the customer premises equipment according to claim 37, wherein the first data traffic and the second data traffic are monitored, **[a provider of packetized voice (PV) can detect and help prevent congestion in a distributed network, wherein a congestion is detected by monitoring data traffic sent to the subscriber, (Price et al., Paragraph 15)]**.

Regarding claim 39, the customer premises equipment according to claim 37, wherein when the xDSL modem is logged off from a connection to the internet service provider and when the control unit detects the first data traffic: the control unit sends a control signal to the xDSL modem that trigger the xDSL modem to start the logon procedure which is carried out in the authentication channel, thereby logging the xDSL modem logged on to a connection to the internet service provider, **[This predetermined bit within the ToS byte of an IP packet can be used to perform a function similar to the Frame Relay xECN bit or the ATM EFCI bit; that is, it can be used to provide a signal to an IAD that will cause a fast busy/no-resource cause-code to the user, hence preventing the call from occurring, (Price et al., Paragraph 28)].**

Regarding claim 40, the customer premises equipment according to claim 37, wherein when the xDSL modem is logged off from a connection to the internet service provider and when the control unit detects the second data traffic: the control unit sends a control signal to the xDSL modem that trigger the xDSL modem to start the logon procedure which is carried out in the authentication channel, thereby logging the xDSL modem logged on to a connection to the internet service provider, **[This predetermined bit within the ToS byte of an IP packet can be used to perform a function similar to the Frame Relay xECN bit or the ATM EFCI bit; that is, it can be used to provide a signal to an IAD that will cause a fast busy/no-resource cause-code to the user, hence preventing the call from occurring, (Price et al., Paragraph 28)].**

Regarding claim 42, the customer premises equipment according to claim 37, wherein the authentication channel has an authentication protocol embodied in accordance with a point-to-point protocol, **[The xDSL physical layer provides a point-to-point physical layer bitstream upon which any of various framed-packet data formats can be carried in the data link layer, (Price et al., Paragraph 30)].**

Regarding claim 43, the customer premises equipment according to claim 42, wherein the authentication channel has an authentication protocol embodied in accordance with a point-to-point over Ethernet protocol, **[The xDSL physical layer provides a point-to-point physical layer bitstream upon which any of various framed-packet data formats can be carried in the data link layer, (Price et al., Paragraph 30)].**

Claims 32 and 41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Price et al. (US 2002/0163883), in view of McHale et al. (US 6,870,834) and further in view of Humphery et al. (US 2002/00856401).

Regarding claims 32 and 41, the modified Price et al. teaches that the xDSL physical layer may support various types of higher-layer data and voice traffic, wherein the xDSL is the physical data transmission channel as shown in Fig. 1, Ref # 16, **(Price et al., Paragraph 10),**

The modified Price et al. fails to teach that the subscriber terminal device includes an xDSL modem and the external data transmission interface transmits data embodied in accordance with the ITU G.992.1 standard or the ITU G.992.2 standard,

Humphery et al. teaches such non-terminated cables typically exhibit resonance characteristics at xDSL frequencies, **(Humphery et al., Paragraph 52)**, and use of the groups of carriers used in the prior art of G.992.1 and G.992.2 for initialization messages using 8 bit/symbol over 4 carriers (QPSK) downstream direction, **(Humphery et al., Paragraph 60)**, to provide a method of transmitting symbols in a wire line multi-carrier communication system, **(Humphery et al., Paragraph 18)**,

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the modified Price by including an xDSL modem and the external data transmission interface transmits data embodied in accordance with the ITU G.992.1 standard or the ITU G.992.2 standard, wherein Humphery et al. teaches such non-terminated cables typically exhibit resonance characteristics at xDSL frequencies, **(Humphery et al., Paragraph 52)**, and use of the groups of carriers used in the prior art of G.992.1 and G.992.2 for initialization messages using 8 bit/symbol over 4 carriers (QPSK) downstream direction, **(Humphery et al., Paragraph 60)**, to provide a method of transmitting symbols in a wire line multi-carrier communication system, **(Humphery et al., Paragraph 18)**.

**Conclusion**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Shaq Taha** whose telephone number is 571-270-1921. The examiner can normally be reached on 8:30am-5pm Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Jeff Pwu** can be reached on 571-272-6798.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/S. T./

Examiner, Art Unit 2446

/Joseph E. Avellino/

Supervisory Patent Examiner, Art Unit 2458